

REMARKS

The present amendment is in response to the Office Action dated December 6, 2005. Claims 1-12, 14-34, and 36-44 are now present in this case. Claims 13 and 35 are canceled without prejudice. Claims 1, 14, 23, and 26 have been amended.

Claims 1, 3, 5, 6, 8-23, 25, 27, 28, and 30-44 stand rejected under 35 U.S.C. § 103(a) as unpatentable over the combination of U.S. Patent No. 6,223,041 to Egner et al. combined with U.S. Patent No. 5,912,884 to Park et al. The applicants respectfully traverse this rejection and request reconsideration. Claim 1 has been amended to incorporate elements of canceled dependent claim 13. The Office Action, at page 7, asserts that the combination of Egner and Park disclose the subject matter of claim 13 and that Park discloses "identification a re-assignable remote unit." This is incorrect.

Egner and Park are both directed to concepts of allocating resources in wireless communication system, but in a significantly different manner than that recited in the claims of the pending application. Egner discloses a technique for allocating radio frequency channels among the various base stations so that a base station with a large call volume will receive a larger number of assigned frequencies as compared to a base station with a relatively light call volume. Egner does not ever suggest identifying remote units associated with a potentially overloaded station and reassigning some of the remote units to another base station. Thus, Egner reassigns frequency channels, not remote units.

In contrast, Park discloses a wireless communication system in which a potential overload is detected and the call volume of surrounding cells analyzed to identify a cell capable of handling additional traffic. However, Park does not ever identify remote units assigned to the overloaded station and reassign them to the under-utilized station. Rather, Park discloses a technique where the under-utilized station increases its forward link power thereby effectively increasing the coverage area for that particular cell.

Figures 3A and 3B of Park illustrate the operation of the telecommunication system and also dramatically illustrate the difference with the

pending claims. In the center of Figure 3A is a cell with a traffic volume of 88, which is considered to be an overload. Park describes a technique by which nearby cells are analyzed to determine whether any of the nearby cells can handle the traffic overload. However, this analysis, described in columns 3-4 of Park, is based solely on the total traffic volume within the cells. In the example of Figures 3A-3B, the system of Park identifies a cell directly above the overloaded cell as capable of handling the overload. The power of the base station within the identified cell is increased, which effectively enlarges the cell, as illustrated in Figure 3B.

The assumption in Park is that a sufficient number of remote users in the overloaded cell will now be in the coverage area of the newly enlarged cell. This is a potential flaw in the system of Park. For example, if all 88 users in Figure 3A were in the lower half of the overloaded cell, none of the remote units would be transferred to the newly enlarged cell and the system of Park would be totally ineffective. At the other extreme, it is possible that all 88 users in Figure 3A are near the top of the overloaded cell. In this extreme example, all the remote units from the overloaded cell would now be transferred to the newly enlarged cell. As those skilled in the art will appreciate, the newly enlarged cell will be rapidly overloaded. These problems arise because Park does not identify individual remote units as re-assignable, but merely does analysis on a cell-wide basis.

Another problem created by the cell-wide analysis used by Park is that the newly enlarged cell also encroaches on all the other surrounding cells. Although Figures 3A-3B of Park illustrate users being transferred only from the overloaded cell to the newly enlarged cell, it should be noted that the newly enlarged cell also expands and covers territory in all of the adjacent cells. The example does not illustrate the transfer of any remote units from those surrounding cells. However, in reality, the newly enlarged cell would pick up additional remote units from all of the adjacent cells thus causing unpredictable loading. These problems arise due to the failure to consider reassignment of remote units on a unit-by-unit basis. Thus, Park clearly does not identify remote units as being re-assignable.

In sharp contrast to the combination of references cited in the Office Action, claim 1 is directed to a method in which at least a portion of the plurality of

remote units are capable of receiving communication services for more than one of the plurality of stations and recites *inter alia* “identifying at least one of the plurality of remote units assigned to the potentially overloaded station as re-assignable to a substitute station” as well as “reassigning the identified remote units to the substitute station to thereby reduce the number of remote units assigned to receive communication service from the potentially overloaded station.” As discussed above, Egner describes a communication system in which frequency channels are reassigned, but does not suggest the reassignment of remote units from one station to another. Park only measures traffic load on a cell-wide basis and selects a target cell for increased power to thereby increase the effective size of the identified cell. There is no way of predicting how many remote units will now be in the effective coverage area of the newly enlarged cell. This teaches directly away from the invention recited in claim 1 because it does not identify remote units to be reassigned. Accordingly, claim 1 is clearly allowable over the combination of Egner and Park. Claims 2-12 and 14-22 are also allowable in view of the fact that they depend from 1, and further in view of the recitation in each of those claims.

Claim 23 is directed to a signal bearing medium for use in allocating resources in a network in which at least a portion of the plurality of remote units are capable of communicating with the associated station and a substitute station, but are assigned to receive communication service from the associated station. Claim 23 recites *inter alia* “identifying at least one of the portion of remote units as re-assignable to the substitute station” as well as “reassigning the identified remote units to the substitute station.” As discussed above with respect to claim 1, neither Egner nor Park describe the identification of remote units as re-assignable or the reassignment of identified remote units from one station to a substitute station, as recited in claim 23. Egner reassigns frequency channels from one station to another to compensate for load variations while Park discloses a technique by which an under-utilized cell is enlarged by increasing the forward link power in the hope that the newly enlarged cell will encompass additional remote units and alleviate problems with an overloaded cell. However, as discussed above, enlarging the cell by itself does not assure the transfer of any remote units from the overloaded cell because the analysis is done on a cell-wide

basis. There is no suggestion in Park of identifying remote units as re-assignable, as recited in claim 23. Accordingly, claim 23 is clearly allowable over the combination of Egner and Park.

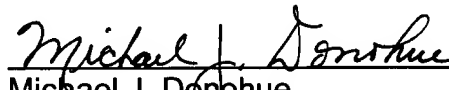
Claims 2, 4, 7, 24, 26, and 29 stand rejected over the combination of Egner and Park combined with U.S. Patent No. 5,293,640 to Gunmar et al. The applicants respectfully traverse this rejection and request reconsideration. Gunmar is cited in the Office only for disclosing analysis of hypothetical radio cells. The inadequacies of the combination of Egner and Park have been described above and, for the sake of brevity, will not be repeated herein. However, the addition of Gunmar to this combination does not overcome the shortcomings of Egner and Park. The combination of references do not suggest the identification of re-assignable remote units and the reassignment of the identified units to another station. Accordingly, claims 2, 4, 7, 24, 26, and 29 are allowable over the combination of Egner, Park, and Gunmar.

In view of the above amendments and remarks, reconsideration of the subject application and its allowance are kindly requested. The applicants have made a good faith effort to place all claims in condition for allowance. If questions remain regarding the present application, the Examiner is invited to contact the undersigned at (206) 628-7640.

Respectfully submitted,

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